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AREI UPDATES: Crop Consultants

Updates on Agricultural Resources and Environmental Indicators

Natural Resources and Environment Division
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Independent Crop Consultants and Nonchemical Pest Management Practices

- Independent crop consultants reported that 84 percent of their client farmers followed their recommendations all or most of the time.
- Consultant-recommended practices most frequently used by clients were fertility management, crop rotation, pest-resistant varieties, and scouting.
- Consultants' annual charges to client farmers averaged from \$3.75 per acre for wheat to \$17.40 per acre for vegetables.
- Leading advantages of using nonchemical practices were reductions in pesticide-resistant pest population problems and increases in beneficial insect populations. Leading constraints were lack of available nonchemical practices and potential lower yield.

Farmers are increasingly using services of crop consultants, as they seek ways to improve profitability and meet environmental standards. Independent crop consultants are not associated with a chemical supplier and number about 3,500 nationally. The responses of 173 independent crop consultants surveyed in 1994 give an indication of what they are recommending and how client farmers are responding. The survey was limited to members of the National Alliance of Independent Crop Consultants. However, USDA endorses no particular group of consultants.

The surveyed consultants indicated that the recommended pest management practices most frequently used by corn,

soybean, and wheat farmers were fertility management and crop rotation. Scouting was also important for wheat. The most common practices for cotton were scouting and beneficial insect monitoring. For rice, the most common practices were crop rotation, crop site location, and water management. The most common practices for vegetables were scouting, fertility management, and soil testing. For tree fruits, the most common practices were pruning and scouting. Scouting and pest-resistant varieties were the most common practices for "other crops."

The surveyed consultants ranked the advantages of nonchemical practices to farmers and the factors limiting farmer use of nonchemical practices. The primary advantages of nonchemical practices were reductions in the buildup of pesticide-resistant pest populations, increases in beneficial insect populations, lower pest management cost, and less contamination of surface and ground water. The primary limitations to farmers' use of nonchemical practices, as indicated by the consultants, were lack of available nonchemical practices, lower yields, higher production costs, and higher management skills required.

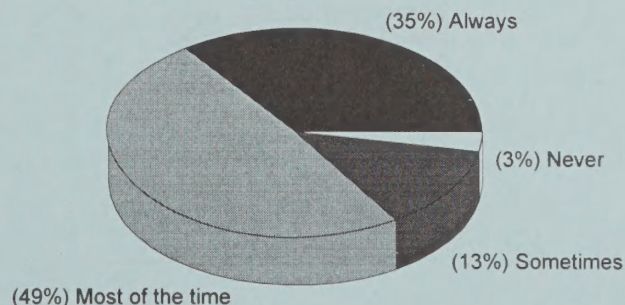
The consultants' annual fee/acre ranged from \$3.75 for wheat to \$17.40 for vegetables. The seasonal fee/acre ranged from \$3.02 for wheat to \$17.40 for tree fruit.

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About AREI UPDATES

AREI UPDATES (formerly RTD UPDATES) is a periodic series which supplements and updates information in the annual report *Agricultural Resources and Environmental Indicators* (AREI). These UPDATES report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource use and conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this UPDATE. If you would like to be added to the mailing list or have other questions about AREI UPDATES or the annual AREI report, contact Richard Magleby, (202) 219-0436.

Figure 1. Frequency of client farmers following consultants' advice in use of nonchemical tactics



Source: USDA, Extension Service, Independent Agricultural Crop Consultant Survey, 1994.

About the Independent Crop Consultant Survey

In 1994, the USDA's Extension Service (now part of the Cooperative State Research, Education, and Extension Service) undertook a survey to help identify potential market-oriented solutions to enhance the use of nonchemical pest management in U.S. agriculture and to assist public-sector research and extension programs direct resources to priority needs. The survey respondents consisted of voting members in 1994 of the National Alliance of Independent Crop Consultants (NAICC) only, because of the availability of addresses. USDA endorses no particular group of consultants. Completed mail survey questionnaires were received from 173 of the 262 NAICC members, a 66-percent response rate. Nationally, independent crop consultants number about 3500. The surveyed consultants averaged 59 farmers under contract per consultant. Of the total acreage of all crops under contract, corn acres accounted for 32 percent, soybeans 19 percent, wheat 13 percent, cotton 17 percent, and rice 2 percent.

Membership in the NAICC is governed by a set of articles which obligates consultants to advise clients to select products and services on the basis of merit and value to the client and not knowingly favor any one product or vendor, except on the basis of price, availability of inputs, and/or the quality of the products offered. In addition to independence from vendors of products and services, members are required to have a minimum of a bachelor's degree and 4 years of prior professional experience as a consultant.

The NAICC consultants work from bases in 36 States covering every major crop and region in the United States. The consultants offer expertise and leadership in use of biotechnology and sustainable agriculture. Many consultants are specialists in integrated pest management (IPM), and provide a full range of services in integrated crop management programs.

Figure 2. Consultants' primary sources of information on nonchemical tactics

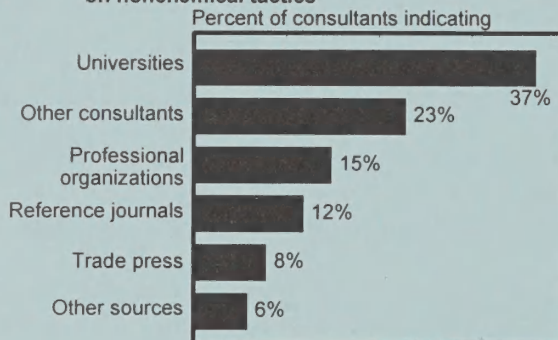


Figure 4. When consultants request information on nonchemical tactics

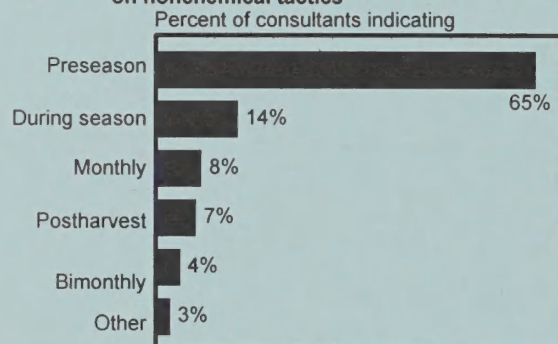


Figure 3. Consultants' views on the most effective ways to obtain information on nonchemical tactics

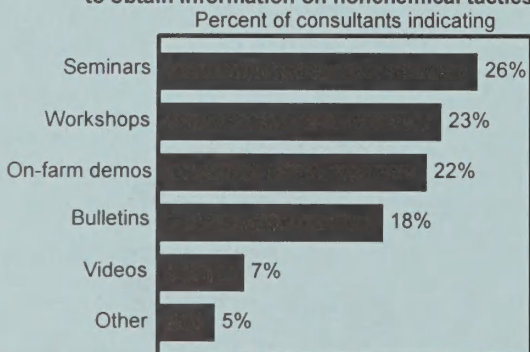


Figure 5. Consultants' average contract fees/acre, by term and crop, 1994

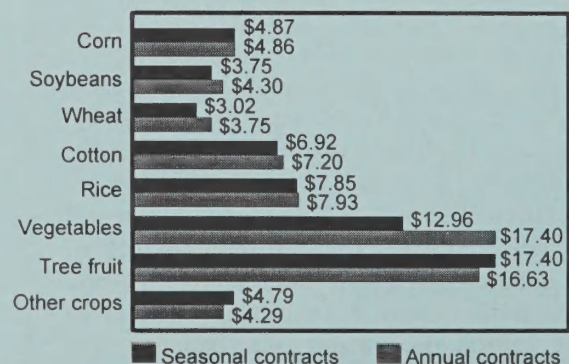


Table 1. Farmers under consultant contracts who used recommended nonchemical pest management practices for selected crops, 1994

Pest management practice	Corn	Soybean	Wheat	Cotton	Rice	Vegetables	Tree fruits	Other crops
Tactic:								
	Percentage of farmers using practice							
Beneficial insect releases	1	0	1	1	1	20	1	6
Crop residue destruction	49	47	37	75	61	54	11	53
Crop rotation	81	82	62	65	88	72	9	45
Crop site location	25	23	41	47	69	67	25	54
Pest resistant varieties	53	64	46	63	42	54	30	62
Pheromones	6	1	3	41	0	39	27	1
Pruning	0	0	0	0	0	1	49	2
Tillage, mowing, chopping	59	55	47	65	35	35	43	42
Timing (plant, harvest)	46	42	56	76	58	33	4	34
Trap crops	1	1	1	10	0	30	1	1
Water management	21	10	20	36	64	35	16	34
Information technology:								
Beneficial insect monitoring	29	24	33	81	24	34	41	55
Scouting	52	41	58	82	55	76	46	68
Soil test (insects, disease)	37	37	42	65	39	73	17	47
Fertility management	88	88	75	76	59	75	44	75
Other practices								
	2	1	2	11	11	19	3	4

Source: USDA, Extension Service, Independent Agricultural Crop Consultant Survey data.

Glossary

Beneficials include natural enemies, e.g., predators and insect pathogens.

Crop residue destruction includes mulching, burning, and plowing under plant residues, e.g., mulching corn and cotton stalks after harvest.

Crop site location refers to strategic location of plants to take advantage of numerous factors, e.g., pesticides applied to previous crop.

Fertility management refers to applying soil nutrients in response to soil nutrient and moisture testing, e.g., nitrogen testing.

Pest resistant varieties refers to use of insect- and disease-resistant plant varieties and root stock.

Pheromones refers to use of sex hormones, generally to attract target pests to traps used in monitoring field pest populations.

Tillage, mowing, and chopping refers to cultural control of pests, e.g. cultivation to control weeds.

Timing of planting and harvesting may be used to avoid periods of peak population levels.

Trap crops are used to attract and kill insects to reduce pest damage to a crop.

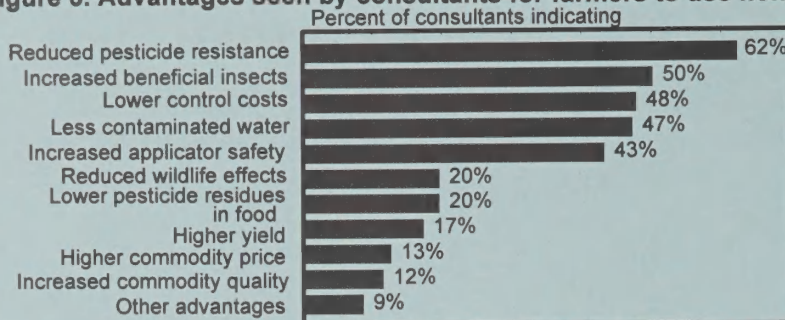
Water management refers to use of irrigation to influence incidence of insect and disease.

Scouting refers to the regular, systematic sampling for pests (and beneficial insects) in the field in order to estimate population levels to assess whether the economic threshold has been reached. The economic threshold is the point at which the benefits of control equal the costs of control.

Resistance refers to development of pest populations that are not affected by pesticides.

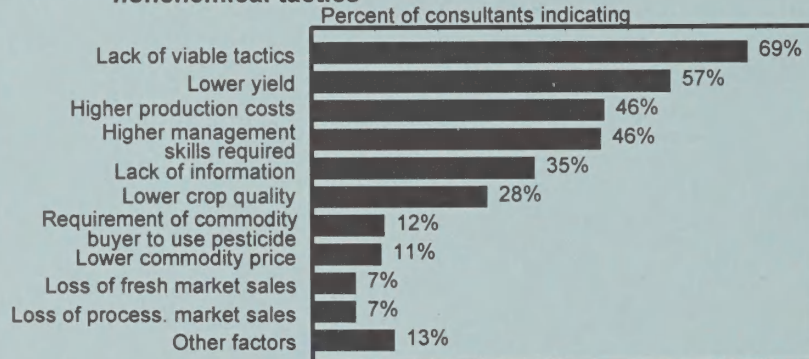
Integrated crop (pest) management refers to managing crops (pests) by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.

Figure 6. Advantages seen by consultants for farmers to use nonchemical tactics*



*Each surveyed consultant listed the three primary advantages to farmers' use of nonchemical tactics.

Figure 7. Consultants' view of the primary factors limiting farmers' use of nonchemical tactics*



*Each surveyed consultant listed the three primary factors limiting farmers' use of nonchemical tactics.

Source: USDA, Extension Service, Independent Agricultural Crop Consultant Survey, 1994.

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